IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A timing correcting device, comprising:

a path detecting unit configured to detect a plurality of path candidates to be tracked from a reception signal, and outputting a path timing ~~and~~, a detection correlation value, and stability information generated from multiple detection correlation values corresponding to each path candidate as a result;

a plurality of decision reference generating units that are individually allocated with [[a]] the result of the ~~detection~~ path detecting unit, configured to generate a predetermined decision standard that is necessary for selecting an optimum path timing from among the timings of the path candidates, based on the allocated information;

an optimum-path selecting unit configured to select an optimum path timing that should be tracked from among the timings of the path candidates, based on ~~a~~ the result of the ~~detection~~ path detecting unit and the predetermined decision standard, wherein the plurality of path candidates are selected within a search window that is matched with the reference timing;

a phase-difference calculating unit configured to compare a predetermined reception reference timing given from the outside with the optimum path timing, and calculates a phase difference between the two timings; and

a timing correcting unit configured to correct the reception reference timing by controlling a clock based on the phase difference.

Claim 2 (Original): The timing correcting device according to claim 1, wherein

the optimum-path selecting unit includes a path selection status, a forward alignment status, and a tracking-path holding status,

during the path selection status, the timing correcting device selects the optimum path timing from among the path candidates based on the detection correlation value or the predetermined decision standard, and thereafter shifts a status from the path selection status to the tracking-path holding status,

during the tracking-path holding status, the timing correcting device compares a result of a detection of a latest path with a timing of a current optimum path thereby to decide whether a path updating processing is to be carried out or not, and carries out the updating processing when a path that satisfies a predetermined updating condition exists as a result of the comparison, and shifts the status from the tracking-path holding status to the forward alignment status when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the forward alignment status, the timing correcting device holds a current optimum path timing when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the timing correcting device shifts the status from the forward alignment status to the path selection status when no continuous paths exist over or above a number of forward alignment stages.

Claim 3 (Currently Amended): The timing correcting device according to claim 2, wherein

during the path selection status, the timing correcting device makes each decision reference generating unit ~~has~~ have a priority as the predetermined decision standard, and selects a timing of a path allocated to the decision reference generating unit having a highest priority as an optimum path timing.

Claim 4 (Original): The timing correcting device according to claim 2, wherein

during the path selection status, the timing correcting device utilizes the detection correlation value as one of the predetermined decision standards, and selects a timing of a path allocated to the decision reference generating unit having a largest detection correlation value as an optimum path timing.

Claim 5 (Currently Amended): The timing correcting device according to claim 2, wherein

during the path selection status, the timing correcting device makes each of the decision reference generating unit ~~has~~ have the stability information ~~of a detection correlation value~~ as the predetermined decision standard, and selects a timing of a path allocated to the decision reference generating unit having ~~correlation value~~ the stability information of a smallest variation in correlation values, as an optimum path timing.

Claim 6 (Original): The timing correcting device according to claim 2, wherein

when a path exists within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the tracking-path holding status, this path satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 7 (Original): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the tracking-path holding status, a path nearest to a current optimum path timing satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 8 (Original): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current optimum path timing as a result of a comparison in the tracking-path holding status, a path having a higher detection correlation value satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 9 (Original): The timing correcting device according to claim 2, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current optimum path timing as a result of a comparison in the tracking-path holding status, a path having a tracking polarity direction that is the same as a past tracking direction satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next optimum path timing.

Claim 10 (Original): The timing correcting device according to claim 2, wherein

each decision reference generating unit includes a path selection status, a backward alignment status, a forward alignment status, and a tracking-path holding status,

during the path selection status, the timing correcting device outputs a timing of an allocated path based on a result of the detection, and thereafter shifts the status from the path selection status to the backward alignment status,

during the backward alignment status, the timing correcting device compares a result of a latest path detection with a timing of a current output path, and shifts the status from the backward alignment status to the path selection status when paths do not exist within a range

of an error of a predetermined number of samples prescribed in advance, and when a path exists within a range of an error of a predetermined number of samples prescribed in advance and further when paths exist continuously over and above a number of backward alignment stages, the timing correcting device shifts the status from the backward alignment status to the tracking-path holding status,

during the tracking-path holding status, the timing correcting device compares a result of a detection of a latest path with a timing of a current output path thereby to decide whether a path updating processing is to be carried out or not, and carries out the updating processing when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the timing correcting device shifts the status from the tracking-path holding status to the forward alignment status when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the forward alignment status, the timing correcting device holds a current optimum path timing when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the timing correcting device shifts the status from the forward alignment status to the path selection status when no continuous paths exist over or above a number of forward alignment stages.

Claim 11 (Original): The timing correcting device according to claim 10, wherein

when a path exists within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the tracking-path holding status, this path satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 12 (Original): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance as a result of a comparison in the tracking-path holding status, a path nearest to a current output path timing satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 13 (Original): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current output path timing as a result of a comparison in the tracking-path holding status, a path having a higher detection correlation value satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 14 (Original): The timing correcting device according to claim 10, wherein

when a plurality of paths exist within a range of an error of a predetermined number of samples prescribed in advance and further when two paths exist at both poles and at equal distance from a current output path timing as a result of a comparison in the tracking-path holding status, a path having a tracking polarity direction that is the same as a past tracking direction satisfies the predetermined updating condition, and the timing correcting device updates the timing of this path as a next output path timing.

Claim 15 (Original): The timing correcting device according to claim 5, wherein

the timing correcting device in configured to calculate the stability information held

by each decision reference generating unit by using the detection correlation value, a moving average of variation widths of the detection correlation value, an average of total past variation widths, a moving sum of variation widths, a moving average of detection correlation values, and/or a combination of these values.

Claim 16 (Currently Amended): A timing correcting method, comprising:

detecting a plurality of path candidates to be tracked from a reception signal, and outputting a path timing ~~and~~, a detection correlation value, and stability information generated from multiple detection correlation values corresponding to each path candidate as a result;

generating a decision reference by individually allocating ~~a~~ the result of the ~~detection~~ detecting, and generating a predetermined decision standard that is necessary for selecting an optimum path timing from among the timings of the path candidates, based on the allocated information;

selecting an optimum path timing that should be tracked from among the timings of the path candidates, based on ~~a~~ the result of the ~~detection~~ detecting and the predetermined decision standard, wherein the plurality of path candidates are selected within a search window that is matched with the reference timing;

calculating a phase-difference by comparing a predetermined reception reference timing given from the outside with the optimum path timing, and calculating a phase difference between the predetermined reception reference timing and the optimum path timing; and

correcting the reception reference timing by controlling a clock based on the phase difference.

Claim 17 (Original): The timing correcting method according to claim 16, wherein

selecting the optimum-path includes a path selection status, a forward alignment status, and a tracking-path holding status,

during the path selection status, the optimum path timing is selected from among the path candidates based on the detection correlation value or the predetermined decision standard, and thereafter a status is shifted from the path selection status to the tracking-path holding status,

during the tracking-path holding status, a result of a detection of a latest path is compared with a timing of a current optimum path thereby to decide whether a path updating processing is to be carried out or not, and the updating processing is carried out when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the status is shifted from the tracking-path holding status to the forward alignment status when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the forward alignment status, a current optimum path timing is held when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the status is shifted from the forward alignment status to the path selection status when no continuous paths exist over or above a number of forward alignment stages.

Claim 18 (Original): The timing correcting method according to claim 17, wherein

generating the decision reference includes a path selection status, a backward alignment status, a forward alignment status, and a tracking-path holding status,

during the path selection status, a timing of an allocated path is output based on a result of the detection, and thereafter the status is shifted from the path selection status to the

backward alignment status,

during the backward alignment status, a result of a latest path detection is compared with a timing of a current output path, and the status is shifted from the backward alignment status to the path selection status when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and when a path exists within a range of an error of a predetermined number of samples prescribed in advance and further when paths exist continuously over or above a number of backward alignment stages, the status is shifted from the backward alignment status to the tracking-path holding status,

during the tracking-path holding status, a result of a detection of a latest path is compared with a timing of a current output path thereby to decide whether a path updating processing is to be carried out or not, and the updating processing is carried out when a path exists that satisfies a predetermined updating condition as a result of the comparison, and the status is shifted from the tracking-path holding status to the forward alignment status when paths do not exist within a range of an error of a predetermined number of samples prescribed in advance, and

during the forward alignment status, a current optimum path timing is held when a path exists within a number of forward alignment stages even when paths do not exist within the range of an error of a predetermined number of samples prescribed in advance, and the status is shifted from the forward alignment status to the path selection status when no continuous paths exist over or above a number of forward alignment stages.